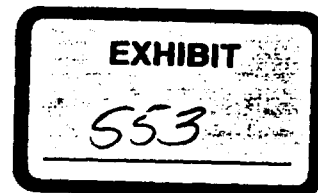




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STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER POLLUTION CONTROL
6TH FLOOR, L & C ANNEX
401 CHURCH STREET
NASHVILLE, TN 37243-1534



March 31, 1993

Mr. William M. Cummings, P.E.
Director, Environmental Engineering
CSX Transportation
500 Water Street, SC J350
Jacksonville, FL 32202

NASHVILLE ENVIRONMENTAL
RECEIVED

APR 1 1993

TENNESSEE DEPARTMENT
OF ENVIRONMENT
AND CONSERVATION
FIELD OFFICE

Re: NPDES Permit No. TN0064955
CSX Transportation
Nashville, Davidson County, Tennessee

Dear Mr. Cummings:

In accordance with the provisions of "The Tennessee Water Quality Control Act" (Tennessee Code Annotated, Sections 69-3-101 through 69-3-120) the enclosed NPDES Permit is hereby issued by the Division of Water Pollution Control. The continuance and/or reissuance of this NPDES Permit is contingent upon your meeting the conditions and requirements as stated therein.

Please be advised that you have the right to appeal any of the provisions established in this NPDES Permit, in accordance with Tennessee Code Annotated, Section 69-3-110, and the General Regulations of the Tennessee Water Quality Control Board. If you elect to appeal, you should file a Petition within thirty (30) days of the receipt of this permit.

If you have questions concerning this correspondence, please contact Abbas Yavari at (615) 532-0668

Sincerely,

Thomas E. Roehm
Manager, Industrial Facilities Section
Division of Water Pollution Control

TER/ay

P/WAT/5

Enclosure

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cc: Division of Water Pollution Control, Nashville Basin Office

STATE OF TENNESSEE

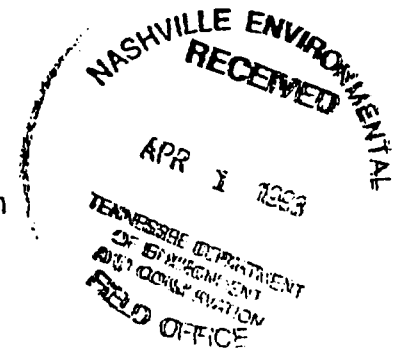
NPDES PERMIT

No. TN0064955

Authorization to discharge under the
National Pollutant Discharge Elimination System

Issued By

Division of Water Pollution Control
401 Church Street, 6th Floor, L & C Annex
Tennessee Department of Environment and Conservation
Nashville, Tennessee 37243 - 1534



Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101, et seq.) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.)

Discharger: CSX Transportation - Radnor Yard

is authorized to discharge: storm water runoff and groundwater through Outfall 001 (storm water outlet downstream of junction manhole)

from a facility located: in Nashville, Davidson County, Tennessee

to receiving waters named: East Fork Browns Creek at mile 2.1 which enters Browns Creek at mile 3.7 which enters the Cumberland River at mile 192.7

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on: March 31, 1993

This permit shall expire on: March 30, 1998

Issuance date: March 31, 1993

Paul E. Davis
Director
Division of Water Pollution Control

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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CSX Transportation - Radnor Yard is authorized to discharge storm water runoff and groundwater through Outfall 001 (behind 4071 Powell Ave. (Heafner Tire) to East Fork Browns Creek at mile 2.1 which enters Browns Creek at mile 3.7 which enters the Cumberland River at mile 192.7. Discharge 001 shall be limited and monitored by the permittee as specified below.

Outfall 001

<u>Effluent Characteristic</u>	<u>Effluent Limitations</u>				<u>Monitoring Requirements</u>	
	Monthly Avg. Conc. mg/l	Monthly Avg. Amount lb/day	Daily Max. Conc. mg/l	Daily Max. Amount lb/day	Measurement Frequency	Sample Type
Flow	-	-	-	-	1/month*	instantaneous
Total Suspended Solids	-	-	Report	-	1/month*	grab
Settleable Solids	-	-	Report	-	1/month*	grab
Oil and Grease	-	-	30	-	1/month*	grab
Visible Oil**	-	-	-	-	2/week	**
pH	Within range of 6.0 to 9.0				1/month*	grab
96 Hr. LC50	survival in 100% effluent				***	***
NOEL	survival, reproduction, and growth in 100% effluent				***	***

Flow shall be reported in million gallons per day.

* Measurement frequency shall be once per month, and must be at least 48 hours later than a 0.1 inch rainfall for the purposes of defining dry weather sampling.

** The permittee shall report whether or not an oily sheen is present on the water at the outfall structure. Report number of times present and number of times not present in the comment section of the discharge Monitoring Report Form.

*** Report only during the Schedule of Compliance.

*** See Part III for methodology and Part 1.E for frequency.

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<u>Effluent Characteristic</u>	<u>Effluent Limitations</u>				<u>Monitoring Requirements</u>	
	Monthly Avg. Conc. mg/l	Monthly Avg. Amount lb/day	Daily Max. Conc. mg/l	Daily Max. Amount lb/day	Measurement Frequency	Sample Type
Flow	-	-	-	-	1/month*	Instantaneous
Total Suspended Solids	-	-	40	-	1/month*	grab
Settleable Solids	-	-	0.5 ml/l	-	1/month*	grab
Oil and Grease	-	-	30	-	1/month*	grab
pH	Within range of 6.0 to 9.0				1/month*	grab

Flow shall be reported in million gallons per day.

* Measurement frequency shall be once per month, and must be at least 48 hours later than a 0.1 inch rainfall for the purposes of defining dry weather sampling. The storm water discharge sample type (wet weather) shall be taken over the first three (3) hours of the discharge, or over the entire discharge if the discharge lasts less than three (3) hours. Storm events sampled for storm water characteristics shall be greater than 0.1 inches in total rainfall and must be at least 72 hours after a 0.1 inch rainfall. This is to better characterize the dry and wet impacts of CSXT Radnor Yard's contaminated storm water and groundwater discharges.

Ground Water Protection Plan

Ground water compliance monitoring and remediation will be required (see Part III of permit).

There shall be no discharge of product(s) or wastes to groundwater under the terms of this permit.

Storm Water Concerns

Oil and grease shall not be allowed to be washed out during conditions of high discharge flow. The oil and grease shall not cause visible pollution in the receiving waters or visibly accumulate on the banks of drainage ways.

Collected particulates, previously settled solids shall not be washed off the property into the receiving stream. Where particulates are collected and handled, proper and reasonable measures shall be taken to prevent contamination of storm waters by these solids. Removal of settled solids shall be provided on a regular and routine basis where such solids are settled out of suspension in the water.

The following conditions also apply to Discharge 001 and Internal Monitoring Point 01A:

The wastewater discharge must not cause an objectionable color contrast in the receiving stream.

There shall be no distinctly visible floating scum, oil or other matter contained in the wastewater discharge.

The wastewater discharge must result in no other materials in concentrations sufficient to be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream.

Sludge or any other material removed by any treatment works must be disposed of in a manner which prevents its entrance into or pollution of any surface or subsurface waters. Additionally, the disposal of such sludge or other material must be in compliance with the Tennessee Solid Waste Disposal Act, TCA 68-31-101 et seq. and the Tennessee Hazardous Waste Management Act, TCA 68-46-101 et seq.

B. MONITORING PROCEDURES

1. Representative Sampling: Outfall 001 and Internal Monitoring 01A

Samples and measurements taken in compliance with the monitoring requirements specified above shall be representative of the volume and nature of the monitored discharge, and shall be taken at the following location(s): behind 4071 Powell Ave. (Heafner Tire) at East Fork Browns Creek mile 2.1 and at the oil and water separator.

2. Test Procedures

- a. Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304 (h) of the Clean Water Act, as amended, under which such procedures may be required.
- b. Unless otherwise noted in the permit, all pollutant parameters shall be determined according to methods prescribed in Title 40, CFR, Part 136, as amended, promulgated pursuant to Section 304 (h) of the Act.

3. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling;
- b. The exact person(s) collecting samples;
- c. The dates and times the analyses were performed;
- d. The person(s) or laboratory who performed the analyses;
- e. The analytical techniques or methods used, and;
- f. The results of all required analyses.

4. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Division of Water Pollution Control.

C. DEFINITIONS

The "daily maximum concentration" is a limitation on the average concentration, in milligrams per liter, of the discharge during any calendar day.

When a proportional-to-flow composite sampling device is used, the daily concentration is the concentration of that 24-hour composite; when other sampling means are used, the daily concentration is the arithmetic mean of the concentrations of equal volume samples collected during any calendar day or sampling period.

The "monthly average concentration", a limitation on the discharge concentration in milligrams per liter, is the arithmetic mean of all individual concentrations determined in a one-month period. For parameters measured less than twice per month, only the daily maximum value shall be reported. The Division may, by letter, increase the monitoring frequency and/or establish a monthly and/or weekly average limit.

A "composite sample", for the purposes of this permit, shall consist of at least three grab samples which are representative of the discharge. Such a composite may be the concentration of a sample consisting of three equal volume grab samples collected consecutively at thirty-minute intervals.

For the purpose of this permit a "calendar day" is defined as any 24-hour period.

A "quarter" is defined as any one of the following three-month periods: January 1 through March 31, April 1 through June 30, July 1 through September 30, and/or October 1 through December 31.

A "grab sample" is a single effluent sample collected at a particular time. The sample(s) shall be collected at the period(s) most representative of the total discharge.

D. REPORTING

1. Monitoring Results

Monitoring results shall be recorded monthly and submitted monthly using Discharge Monitoring Report Forms supplied by the Division of Water Pollution Control. Submittals shall be postmarked no later than 15 days after the completion of the reporting period. The top two copies of each report are to be submitted. A copy should be retained for the permittee's files. Discharge Monitoring Reports and any communication regarding compliance with the conditions of this permit must be sent to:

Division of Water Pollution Control
Attention: Compliance Review
Department of Environment and Conservation
6th Floor, L & C Chamber
401 Church Street
Nashville, Tennessee 37243-1534

The first Discharge Monitoring Report is due May 15, 1993

Discharge Monitoring Reports must be signed and certified by a responsible corporate officer, as defined at 40 CFR 122.22, or a general partner or proprietor, or a principal municipal executive officer or ranking elected official, or a duly authorized representative. Such authorization must be submitted in writing and must explain the duties and responsibilities of the authorized representative.

2. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Form. Such increased frequency shall also be indicated.

3. Falsifying Reports

Knowingly making any false statement on any report required by this permit may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Water Pollution Control Act, as amended, and in Section 69-3-115 of the Tennessee Water Quality Control Act.

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E. SCHEDULE OF COMPLIANCE

Except as provided in this part, permit effluent limits in Part I.A. shall become effective on the issuance date of this permit. The Division proposes that CSXT conduct a study of toxicity by testing the discharge during dry and wet weather flows. No numerical limits will be set on the toxicity of Discharge 001 during this study period. A two years schedule of compliance will be included in the Permit. The first samples shall be collected within 90 days after the effective date of the permit. CSXT shall provide the Division with a scope of work with interim milestones within 90 days from the effective date of the permit. CSXT will be required to provide the Division with interim reports and test results after each stage of the toxicity study is completed, and a complete final report and recommendation on ways to eliminate the toxicity problems at Outfall 001, 90 days after the completion of the two years Schedule of Compliance. TDWPC, may then modify the permit and require CSXT to conduct more tests and/or implement toxicity reduction of their discharge waters. Permit limits on the toxicity of the discharge may also be added to the permit.

Present, standard chronic biomonitoring language will be used for guideline purposes in this study. Both dry weather flow (groundwater discharge) and wet weather flow (runoff and groundwater discharge) must be included in the toxicity tests.

PART II

A. GENERAL PROVISIONS

1. Duty to Reapply

Permittee is not authorized to discharge after the expiration date of this permit. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information and forms as are required to the Director no later than 180 days prior to the expiration date.

2. Right of Entry

The permittee shall allow the Director, the Regional Administrator of the U.S. Environmental Protection Agency, or their authorized representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises where an effluent source is located or where records are required to be kept under the terms and conditions of this permit, and at reasonable times to copy these records;
- b. To inspect at reasonable times any monitoring equipment or method or any collection, treatment, pollution management, or discharge facilities required under this permit; and
- c. To sample at reasonable times any discharge of pollutants.

3. Availability of Reports

Except for data determined to be confidential under Section 308 of the Federal Water Pollution Control Act, as amended, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Water Pollution Control. As required by the Federal Act, operational data shall not be considered confidential.

4. Proper Operation and Maintenance

- a. The permittee shall at all times properly operate and maintain all facilities and systems (and related appurtenances) for collection and treatment which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

- b. Where a backup power source is provided for the treatment system or a pumping station, the power source must be tested once per month to prove reliability. The date of this test shall be reported on the Monthly Operation Report.
- c. Dilution water shall not be added to comply with effluent requirements.

5. Treatment Facility Failure (Industrial Sources)

The permittee, in order to maintain compliance with this permit, shall control production, all discharges or both, upon reduction, loss, or failure of the treatment facility, until the facility is restored or an alternative method of treatment is provided. This requirement applies in such situations as the reduction, loss, or failure of the primary source of power.

6. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

7. Severability

The provisions of this permit are severable. If any provision of this permit due to any circumstance, is held invalid, then the application of such provision to other circumstances and to the remainder of this permit shall not be affected thereby.

8. Other Information

If the permittee becomes aware that he failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, then he shall promptly submit such facts or information.

B. CHANGES AFFECTING THE PERMIT

1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
- b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject

neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).

2. Permit Modification, Revocation, or Termination

- a. This permit may be modified, revoked and reissued, or terminated for cause as described in 40 CFR 122.62 and 122.64, Federal Register, Volume 49, No. 188 (Wednesday, September 26, 1984), as amended.
- b. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.
- c. If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established for any toxic pollutant under Section 307(a) of the Federal Water Pollution Control Act, as amended, the Director shall modify or revoke and reissue the permit to conform to the prohibition or to the effluent standard, providing that the effluent standard is more stringent than the limitation in the permit on the toxic pollutant. The permittee shall comply with these effluent standards or prohibitions within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified or revoked and reissued to incorporate the requirement.

3. Change of Ownership

This permit may be transferred to another person by the permittee if:

- a. The permittee notifies the Director of the proposed transfer at least 30 days in advance of the proposed transfer date;
- b. The notice includes a written agreement between the existing and the new permittees containing a specified date for transfer of permit responsibility, coverage, and liability between them; and
- c. The Director, within 30 days, does not notify the current permittee and the new permittee of his intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

4. Change of Mailing Address

The permittee shall promptly provide to the Director written notice of any change of mailing address. In the absence of such notice

the original address of the permittee will be assumed to be correct.

C. NONCOMPLIANCE

1. Effect of Noncompliance

All discharges shall be consistent with the terms and conditions of this permit. Any permit noncompliance constitutes a violation of applicable State and Federal laws and is grounds for enforcement action, permit termination, permit modification, or denial of permit reissuance.

2. Reporting of Noncompliance

a. 24-Hour Reporting

In the case of any noncompliance which would cause a threat to public drinking supplies, or any other discharge which could constitute a threat to human health or the environment, the required notice of noncompliance shall be provided to the appropriate Division field office within 24 hours from the time the permittee becomes aware of the circumstances. (The field office should be contacted for names and phone numbers of emergency response personnel.)

A written submission must be provided within five days of the time the permittee becomes aware of the circumstances unless this requirement is waived by the Director on a case-by-case basis. The permittee shall provide the Director with the following information:

- i. A description of the discharge and cause of noncompliance;
- ii. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and
- iii. The steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

b. Scheduled Reporting

For instances of noncompliance which are not reported under subparagraph 2. a. above, the permittee shall report the noncompliance on the Discharge Monitoring Report. The report shall contain all information concerning the steps taken, or planned, to reduce, eliminate, and prevent recurrence of the violation and the anticipated time the violation is expected to continue.

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3. Bypassing

- a. "Bypass" means the discharge of wastes from any portion of the collection or treatment system other than through the permitted outfall.
- b. Bypassing is prohibited except where necessary to prevent loss of life or severe property damage, or where excessive storm drainage or runoff would damage treatment facilities.
- c. No new or additional flows shall be added upstream of any point in the collection system which experiences chronic bypassing (greater than 5 events per year). Unless there is specific enforcement action to the contrary, the permittee is relieved of this requirement after the State has reviewed and approved a plan for correction of the problem and the correction work is underway.

4. Diversion

- a. "Diversion" is the intentional rerouting of wastewater within a treatment facility away from a biological portion of the treatment facility.
- b. A diversion is permissible only when necessary to protect the active biomass from a wash-out due to peak flow events and when this action does not cause effluent limitations to be exceeded.

5. Upset

- a. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology - based permit effluent limitations if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - ii. The permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;

- iii. The permittee submitted information required under "Reporting of Noncompliance" within 24 hours of becoming aware of the upset (if this information is provided orally, a written submission must be provided within five days); and
 - iv. The permittee complied with any remedial measures required under "Adverse Impact."
- 6.
 - a. For domestic wastewater plants only, a "washout" shall be defined as a loss of Mixed Liquor Suspended Solids (MLSS) of 30% or more. This refers to the MLSS in the aeration basin(s) only. This does not include MLSS decrease due to solids wasting to the sludge disposal system. A washout can be caused by improper operation or from peak flows due to infiltration and inflow.
 - b. A washout is prohibited. If a washout occurs the permittee must report the incident to the appropriate field office within 24 hours by telephone. A written submission must be provided within five days. The washout must be noted on the discharge monitoring report. Each day of a washout is a separate violation.
- 7. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the waters of Tennessee resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. LIABILITIES

1. Civil and Criminal Liability

Except as provided in permit conditions or "Bypassing", "Diversion", "Upset", and "Treatment Facility Failures", nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Notwithstanding this permit, the permittee shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge of wastewater to any surface or subsurface waters. Additionally, notwithstanding this Permit, it shall be the responsibility of the permittee to conduct its wastewater treatment and/or discharge activities in a manner such that public or private nuisances or health hazards will not be created.

2. Liability Under State Law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or the Federal Water Pollution Control Act, as amended.

E2061029/D-6/WPCPERM

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TOXIC POLLUTANTS

The permittee shall notify the Division of Water Pollution Control as soon as it knows or has reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis, of any toxic substance(s) (listed at 40 CFR 122, Appendix D, Table II and III) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (1) One hundred micrograms per liter (100 ug/l);
 - (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant(s) in the permit application in accordance with 122.21(g)(7); or
 - (4) The level established by the Director in accordance with 122.44(f).
- b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (1) Five hundred micrograms per liter (500 ug/l);
 - (2) One milligram per liter (1 mg/l) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 122.21(g)(7); or
 - (4) The level established by the Director in accordance with 122.44(f).

BIOMONITORING REQUIREMENTS, CHRONIC

The permittee shall conduct a 7-Day *Ceriodaphnia* Survival and Reproduction Test and a 7-Day Fathead Minnow (*Pimephales promelas*) Larval Survival and Growth Test on samples of final effluent from Outfall 001. Toxicity will be demonstrated if more than 50% lethality of the test organisms occurs in 96 hours in 100% effluent or the no observable effect level (NOEL) is less than 100%. All tests will be conducted on 24-hour composite samples of final effluent. All test solutions shall be renewed daily. If, in any control, more than 10% of the test organisms die in 96 hours or more than 20% of the test organisms dies in 7 days, that test (control and effluent) shall be repeated. Such testing will determine whether the effluent affects the survival, reproduction, and/or growth of the test organisms.

The toxicity tests specified above shall be conducted during the Schedule of Compliance for a period of two years following the effective date of the permit. The Division of Water Pollution Control may request more frequent monitoring if significant toxicity is found in the effluent. The first test shall be conducted within ninety (90) days from the effective date of this permit. Results shall be reported according to EPA/600/4-89/001, Section 9, Report Preparation, and two copies shall be submitted to the Division in accordance with the Schedule of Compliance. If any one test shows lethality to more than 50% of the test organisms in 100% effluent in 96 hours and/or the NOEL is less than 100%, then the next paragraph applies.

If toxicity (greater than 50% lethality of test organisms in 100% effluent in 96 hours or a NOEL of less than 100%) is found in any of the tests specified above, this will not constitute a violation of this permit during Schedule of Compliance, since no numerical limits are set in the permit.

The determination of effluent quality values will be made in accordance with Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, EPA/600/4-90/027.

All test organisms, procedures and quality assurance criteria used shall be in accordance with Short-term Methods For Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Section 12: Ceriodaphnia Survival and Reproduction Test Method 1002.0 and Section 10: Fathead Minnow (*Pimephales promelas*) Larval Survival and Growth Test Method 1000.0, EPA/600/4-89/001. The permittee's selection of an appropriate control water for the toxicity tests shall be submitted to the Division for review and approval prior to use. The permittee shall submit the name of the laboratory performing the toxicity test(s) to the Division.

The Division will accept results of tests conducted using concentrations equal to the LC₅₀ and NOEL values with an appropriate control. In the event of toxicity, subsequent tests must be conducted using the serial dilutions as per the EPA methods to determine the extent of toxicity.

MAINTENANCE OF OIL AND WATER SEPARATOR

The permittee will be required to inspect the oil/water separator twice per week and to maintain a record of the inspection and of occasions when oil is pumped out of the oil storage tank.

Water contaminated with substances other than petroleum products or settleable solids amenable to gravity separation shall not be discharged through an oil/water separator until such discharge receives treatment approved by the Division of Water Pollution Control.

Methylene Blue Active Substances (MBAS)

Surfactants in the oil/water separator would inhibit separation of oil from water. The Division proposes for CSXT Radnor to use Best Management Practices (BMP) in the use of soaps and detergents that may enter the oil/water separator as part of their storm water pollution prevention plan. No numerical limit will be included in the permit.

PLACEMENT OF SIGNS

The permittee shall place and maintain a sign(s) at each outfall. The location of the sign(s) should be at or near the Outfall points or located where the samples are collected. The minimum sign size should be two feet by two feet (2' x 2') with two inch (2") letters. The sign should be made of durable material and have a white background with black letters.

The sign(s) are to provide notice that the discharge is regulated by the Tennessee Department of Environment and Conservation, Division of Water Pollution Control. The following is given as an example of the minimal amount of information that must be included on the sign:

OUTFALL 001

<p>STORM WATER RUNOFF AND GROUNDWATER DISCHARGE POINT (PERMITTEE'S NAME) (PERMITTEE'S PHONE NUMBER) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT # _____ TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION DIVISION OF WATER POLLUTION CONTROL</p>

The State feels very strongly that ground water concerns need to be addressed. However, the State of Tennessee does not have resources to closely track and pursue such concerns at this time. Ground water concerns must be addressed by facility operators who bear the responsibility to operate a facility without hazard to the environment. Part of that responsibility is protection of ground water from contamination and fulfilling monitoring needs at the site.

Permit language allows a facility to assess its site and indicate whether there is a possibility for ground water contamination, and thus, a need for ground water monitoring. Contamination of soils or ground water at sites which store diesel fuel and oil indicate a need for ground water monitoring at these facilities.

If ground water monitoring is needed, the facility will institute such monitoring according to a ground water monitoring plan that will be developed by the facility operators. The Division of Water Pollution Control will not require that data and reports generated under the Plan be submitted to the State on a regular basis, but data and reports relevant to the ground water monitoring must be maintained at the facility and provided by the facility to the State upon request.

If ground water contamination is suspected, the facility operators should notify the Division of Water Pollution Control. Also, facility operators should notify neighboring property owners, utilities and those users of ground water who may be affected by such contamination. The Division of Water Pollution Control will require a remediation plan to be submitted within 30 days of the discovery of contamination of the soil or ground water.

A plan for protection of ground water from contamination by products or materials stored at the site must be prepared, by a registered engineer or geologist. This plan must be prepared and implemented within 18 months of the effective date of the permit. At least one copy of the plan must be maintained at the site and shall be made available to the Division of Water Pollution Control upon request.

As a minimum, the Plan shall include the following:

1. A plan for monitoring site ground water for pollutants that are indicative of contamination by products or materials stored at the site. The location and description of monitoring wells and the basis for such wells must be clearly shown. The selected parameters and monitoring schedule shall be documented. Monitoring frequency shall be at least once per quarter.

If the permittee can show that due to impervious barriers there is no potential for contamination of ground water from activities at the site, no ground water monitoring will be required. However, documentation for this must be maintained at the site and will serve as the Plan for that site.

2. An identification must be made of those who will be notified if ground water contamination is suspected. This list must include neighboring property owners, utilities, the Division of Water Pollution Control, and other appropriate local agencies. Notification must also include users of ground water who might be affected by such contamination.
3. Methods used to develop the ground water monitoring wells and the construction details of the wells must be documented in the Plan. The permittee will be responsible for ensuring that wells are properly and safely completed so that they do not pose a threat to ground water. The Plan should also indicate how wells will be closed out if they are no longer used.
4. EPA's RCRA Ground-Water Technical Enforcement Guidance Document TEGD (OSWER-9950.1) may be used as guidance on the development of ground water monitoring plans.
5. The Plan may be modified as circumstances require.

All well records and monitoring data will be maintained by the permittee at the site and will be made available to the Division of Water Pollution Control upon request.

A remediation plan must be developed and submitted to the Division of Water Pollution Control within thirty (30) days of detection of ground water or soil contamination.

A. SCOPE AND INTENT

The permittee shall develop and maintain a Storm Water Pollution Prevention Plan to minimize the discharge of pollutants in storm water runoff. The Plan shall identify:

1. The area in square feet of the facility, minus the area of undeveloped, uncontaminated land; and the area of impervious surfaces on facility property.
2. pollutants potentially present in storm water;
3. pollutant sources;
4. storm water outfalls and monitoring points;
5. monitoring procedures;
6. pollutant control procedures; and
7. spill prevention and response procedures.

If similar plans already exist at the site (SPCC plans, best management practices plans, emergency or other plans) which adequately address requirements of this Storm Water Pollution Prevention Plan, these existing plans may be incorporated by reference into the Storm Water Pollution Prevention Plan. Once incorporated into the Storm Water Pollution Prevention Plan, these documents shall be considered a part of the Storm Water Pollution Prevention Plan and shall be subject to the documentation and record keeping requirements of this section.

B. DOCUMENTATION AND IMPLEMENTATION

The Plan should be developed and available for review by the Nashville Basin Office no later than 180 days after the effective date of this permit. The Plan shall be reviewed by plant management before it is implemented at the site. The Plan shall be reviewed and updated by the permittee at least annually after the initial implementation.

The Plan shall be maintained by the permittee on the site or at a nearby office. Copies of the Plan shall be submitted to the Division within ten (10) working days (post marked) of a request by the Division for a copy of the Storm Water Plan.

The permittee shall document all changes made to the Plan. The Plan, all changes, and special reports and summary reports of site data shall be retained by the permittee for a period of at least three years.

The permittee shall also maintain a record of its individual analytical data for storm water sampling results and a record of the inspections called for in the General Requirements below. These records shall be retained by the permittee for a period of at least three years. Such documentation shall include

1. when inspections are conducted,
2. the findings of the inspections, and
3. any corrective actions taken.

C. GENERAL REQUIREMENTS

The following items shall be incorporated into the document.

1. A site map identifying drainage and discharge structures; an outline of the drainage area of each storm water outfall; paved areas and buildings and other ground cover within those drainage areas; each past or present area for outdoor storage or disposal of significant materials [as defined at 40 CFR 122.26(b)(12), November 16, 1990]; structural measures for the control of storm water; materials loading and access areas; areas where pesticides, herbicides, soil conditioners and fertilizers are applied; hazardous waste storage or disposal areas; underground injection wells; springs; and other surface water bodies.

2. A pollutant control strategy that identifies pollutants potentially present in storm water runoff, potential sources of pollutants, and control procedures used to minimize the discharge of pollutants.

To identify pollutants potentially present, the permittee shall consider, at a minimum, those pollutants and substances listed in Tables 2F-2, 2F-3 and 2F-4 of EPA Form 2F (November, 1990). The permittee shall identify pollutants as potentially present by considering materials storage and handling practices at the facility, waste disposal practices, outdoor process activities, and dust or particulate generating processes.

The pollutant control strategy shall consider the use of containment structures, covering material by roof or tarpaulin, preventive maintenance, good housekeeping, waste minimization, removal of exposed pollutants and spill prevention practices.

The strategy shall identify areas which have a high potential for soil erosion and describe practices to limit erosion.

3. Spill response steps that identify facility personnel responsible for implementation of spill response actions. The methodology outlined in the spill response section should include areas where spills might occur and their accompanying drainage points. Procedures for cleaning up spills shall be identified in the spill response portion of the Plan. The necessary equipment to implement a clean up should be available to personnel. Responsible personnel must be available at all times when the facility is in operation.
4. For each outfall monitored, the surface area and type of cover, for example, roof, pavement, grassy areas, gravel, etc. shall be identified. This information shall be recorded as part of the storm water pollution prevention plan.
5. Procedures for implementing and reviewing the plan including:
 - (i) An employee education program that ensures the plan will be effectively implemented;
 - (ii) A protocol for the semi-annual inspections that ensures the pollutant control strategy and the spill prevention and response plan are being effectively carried out; and
 - (iii) Documentation procedures for all inspections and reviews required in the plan.
6. The permittee shall conduct site inspections at least semi-annually to check that the plan remains effective.

D. MODIFICATION

The permittee shall modify the Storm Water Pollution Prevention Plan whenever there is a change in the facility or change in the operation of the facility which materially increases the potential for discharge of significant amounts of pollutants.

If the Storm Water Pollution Prevention Plan proves to be ineffective in achieving the general objective of preventing the release of significant amounts of pollutants to surface waters or is ineffective in meeting its specific objectives, the Plan shall be subject to modification. Modification of the Plan may be undertaken without modifications to the conditions of this permit. The Division of Water Pollution Control shall be notified of any modification to Storm Water Pollution Prevention Plan. Such modifications shall not be implemented unless the Division has been given opportunity to review the modifications.

The Storm Water Pollution Prevention Plan shall be modified as required by the Director of the Division Water Pollution Control.

NPDES Permit TN0064955

January 28, 1993

I. Facility Identification

CSX Transportation - Radnor Yard
Nashville, Davidson County, Tennessee

Facility Contact:

Mr. William M. Cummings, P.E. Phone Number: (904) 359-1986
Dir. Environmental Engineering
CSX Transportation
500 Water Street, 9th Floor
Speed Code J275
Jacksonville, Florida 32202

Greer Tidwell, Jr. Phone Number: (615) 726-5600
Baker, Worthington, Crossley, Stansberry & Woolf
1700 Nashville City Center
511 Union Street
Nashville, Tenn 37219

SIC Code: 4011, Railroads, Line Haul
4013, Railroad Switching and Terminal

Activity: operation of a railroad terminal

This facility is a minor facility in a secondary industry category.

II. Permit Status

This is a new permit. Original application was received on February 2, 1990 (in response to Commissioner's Order of June 20 1990).

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As a result of two meetings between TDWPC and CSXT on December 8 and December 30, 1992, and the letter of January 22, 1993 from the Resource Consultants to the Division, the draft permit will be revised to reflect the issues agreed upon in the meetings.

III. Facility Discharges

There are three discernible sources of storm water runoff and groundwater from CSX property to East Fork Browns Creek. These enter the creek at the junction manhole at creek mile 2.3. These will be designated 1EA, 1SO and 1SW.

For the purpose of completing a NPDES application Form 2C, the company monitored the discharge of East Fork Browns Creek downstream of the junction manhole. Thus, monitoring results on the Form 2C describes all three discharges, plus headwaters of East Fork Browns Creek. A flow of 6.9 MGD was reported on Form 2C for the combination of these discharges.

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Discharge 1EA

Source:

Storm water runoff; groundwater. Runoff comes primarily from the locomotive service area and enters East Fork Browns Creek from the east at the junction manhole. The Division believes this discharge contains more pollutants than discharges from Discharges 1SW and 1SO.

Flow: Variable; see note above.

Treatment: Oil/water separator

Discharge 1SO

Source:

Storm water runoff; groundwater. This discharge enters East Fork Browns Creek at the junction manhole, entering from the classification yard area; i.e., from the south.

Flow: Variable; see note above.

Treatment: No treatment

Discharge 1SW

Source:

Storm water runoff; groundwater. This discharge enters East Fork Browns Creek at the junction manhole, entering from the Trailer On Flat Car (TOFC) yard area; i.e., from the southwest.

Flow: Variable; see note above.

Treatment: No treatment

Outfall 001

Source: Combination of above Discharges 1EA, 1SO, and 1SW

Flow: Variable; see note above.

Treatment: No treatment at this outfall point

Designation of Outfall 001: This permit is drafted to authorize the discharge of storm water and groundwater through point sources 1EA, 1SO, and 1SW to EFBC. Outfall is located behind 4071 Powell Ave. (Heafner Tire) at East Fork Browns Creek mile 2.1.

IV. Receiving Waters

NOTE: The receiving water (East Fork Browns Creek) is at mile 2.3 at the junction manhole, and at mile 2.1 behind Heafner Tire for the purpose of receiving water description in this permit.

Outfall 001

Receiving Water:

East Fork Browns Creek at mile 2.1 (behind Heafner Tire) which enters Browns Creek at mile 3.7 which enters the Cumberland River at mile 192.7

Estimated low flow (3Q20): 0.0 CFS or 0.0 MGD (estimated from U.S.G.S...Ref. No. - 135, Station No. - 03431100),
U.S.G.S...Ref. No. - 136, Station No. - 03431120),
U.S.G.S...Ref. No. - 137, Station No. - 03431200),
U.S.G.S...Ref. No. - 138, Station No. - 03431350)

3Q20 is the critical background flow of the receiving stream, which will be used in this Rationale for East Fork Browns Creek (Rule 1200-4-3-.05 (4)).

STREAM USE CLASSIFICATION: Fish and Aquatic Life, Recreation, Livestock Watering and Wildlife, and Irrigation (Rule 1200-4-4 (12))

V. Applicable Effluent Limitations Guidelines

There are no EPA promulgated effluent limitations guidelines that apply to the discharge of runoff from a railroad terminal or to this discharge of groundwater.

Department of Environment and Conservation regulations Chapter 1200-4-5-.03 set forth Effluent Limitations for Effluent Limited Segments. In the absence of EPA promulgated limitations, the Division employs these limits as maximum effluent limits.

The facility is one which may have "storm water associated with industrial activity" under the storm water regulations in 40 CFR Part 122.26(b)(14).

CSXT has filed for group coverage of their storm water runoff from other areas of their facility not covered by this permit.

VI. New Permit Limits

Outfall 001

Water Quality Considerations-

The Division of Water Pollution Control conducted an intensive stream survey in May, 1989. The Division concluded that East Fork Browns Creek has experienced degradation because of regular discharges of oil, petroleum and other products from Radnor Yard.

East Fork Browns Creek receives runoff from parking lots of 100 Oaks, from I-65 and other nearby roadways.

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On June 12, 1990 the Division personnel collected about two gallons of the floating oil and grease material trapped behind the retaining boom maintained by CSX on the East Fork of Browns Creek (a strong petroleum odor surrounded the boom area). The collected samples were taken to the State Laboratory for toxicity testing and oil and grease analyses. The resulting LC50 concentration were 50% at 24 hours and 1% at 48 hours. The oil and grease concentration for the 1% was 5.1 mg/l, and 61.5 mg/l for the 100%.

Application Form 2C Data:

The applicant reported the following concentrations present in its discharges.

<u>Parameter</u>	<u>Concentration</u> <u>(mg/l)</u>	<u>No. of</u> <u>Samples</u>
BOD	12	4
Ammonia	0.37	4
Oil and Grease	254	3
Surfactants	0.2	1

Other pollutants are reported at less than significant amounts.

Since CSXT has constant flow through Outfall 001 either from groundwater or storm water runoff, TDWPC proposes to monitor their discharges behind 4071 Powell Ave. (Heafner Tire) at East Fork Browns Creek mile 2.1; and internal monitoring at the present oil and water separator. After construction of the new oil and water separator is completed, sampling and internal monitoring must be conducted at the new API oil-water separator. TDWPC proposes dry weather monitoring and sampling of the receiving stream and both dry weather and wet weather monitoring and sampling at the oil and water separator.

The Division proposes the following limitations on the CSX discharges from Outfall 001 behind 4071 Powell Ave. (Heafner Tire) at East Fork Browns Creek mile 2.1.

OUTFALL 001 (dry weather monitoring and sampling)

Flow

The permittee will be required to monitor flow and report as million gallons per day. Monitoring of flow quantifies the load of pollutants to the stream.

Oil and Grease

The Division has determined that an oil and grease limitation is needed for this facility because of the potential of contamination from spills, leaks, and because of CSX's impact on the receiving stream because of their contaminated storm water runoff and groundwater discharge. This parameter will be limited to 30 mg/l daily maximum concentration. This level is one which can be accomplished where oil/water separators are maintained, kept clean and are not overloaded. There should be less reliance upon the oil/water separator as a solution and a greater reliance upon good management, operation and housekeeping practices to restrict pollution.

The State maximum effluent limitation "no visible or floating oil and grease," referring to the discharge from the treatment unit, will also be applied. A visual inspection of the discharge will be required twice per week to determine and record whether or not there is a visible sheen on the discharge immediately below the outfall structure.

Total Suspended Solids: Monitor and report only

Settleable Solids: Monitor and report only

pH

The pH of the discharge will be monitored. Limits for pH will be set at the State Standard Guidance (Rule 1200-4-5-.03), i.e. within the range 6.0 to 9.0.

Blomonitoring

Toxicity Testing: June 12, 1990 State Laboratory toxicity testing on ceriodaphnia dubia showed, LC50 concentration were 50% at 24 hours and 1% at 48 hours.

Tennessee Water Quality Criteria include the condition that all waters of the State be free from substances in concentrations or combinations which are harmful to humans, animals, or aquatic life (T.C.A. 69-3-102 and T.C.A. 69-3-103(21) (D)).

This discharge of storm water runoff and groundwater from a railroad yard contains several different pollutants, the combined effect of which has been detrimental to fish and aquatic life. The Division proposes that CSXT conduct a study of toxicity by testing the discharge during dry and wet weather flows. No numerical limits will be set on the toxicity of Discharge 001 during this study period. A two years schedule of compliance will be included in the Permit Part 1.E. At the end of this study period, CSXT will be required to provide the Division with a complete report, and recommendation on ways to eliminate the toxicity problems at Outfall 001. TDWPC, may then require CSXT to conduct more tests and/or implement toxicity reduction of the discharge. Permit limits on the toxicity of the discharge may also be added to the permit.

Present, standard chronic biomonitoring language will be used for guideline purposes in this study. Both dry weather flow (groundwater discharge) and wet weather flow (runoff and groundwater discharge) must be included in the toxicity tests.

The permittee shall conduct 7-Day Ceriodaphnia Survival and Reproduction Test and 7-Day Fathead Minnow (Pimephales promelas) Larval Survival and Growth Test on samples of final effluent from Outfall 001 during this study period.

The discharge enters a stream with a low flow at or near zero; in order to protect the receiving stream at low flow, the permit will require that 100% effluent to be used in the toxicity tests. Toxicity will be demonstrated if more than 50% lethality of test organisms occurs in 96 hours in 100% effluent or the no observable effect level (NOEL) is less than 100%.

INTERNAL MONITORING POINT 01A (wet and dry weather)

TDWPC proposes the following limitations and monitoring requirements at the oil and water separator (01A):

Methylene Blue Active Substances (MBAS)

Surfactants in the oil/water separator would inhibit separation of oil from water. The Division proposes for CSXT Radnor to use Best Management Practices (BMP) in the use of soaps and detergents that may enter the oil/water separator as part of their storm water pollution prevention plan. No numerical limit will be included in the permit.

Settleable Solids

The Division believes a limit on settleable solids is needed also to indicate adequate operation of the treatment unit, and to protect the receiving stream from sludge deposits that would interfere with propagation of aquatic life. The State maximum effluent limit of 0.5 ml/l (Rule 1200-4-5-.03) will be established as the permit limit.

Total Suspended Solids (TSS)

Water Quality Criteria: No floating solids or sludge banks.

Selected Permit Limits: Since the storm water discharge can be expected to pick up suspended solids, State effluent limitation of 40 mg/l daily maximum concentration (State Rule 1200-4-5.03(2)) will be used as permit limit to prevent violation of the water quality criteria and protect the classified uses of the receiving stream. This TSS limitation will be established.

Oil and Grease

This parameter will be limited to 30 mg/l daily maximum concentration.

pH

The pH of the discharges through the oil and water separator will be monitored. Limits for pH will be set at the State Standard Guidance (Rule 1200-4-5-.03), i.e. within the range 6.0 to 9.0.

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VII. Monitoring Frequencies and Sample Type

OUTFALL 001

Effluent Characteristics	Effluent Limitations				Monitoring Requirements	
	Monthly Avg. Conc. mg/l	Monthly Avg. Amount lb/day	Daily Max. Conc. mg/l	Daily Max. Amount lb/day	Measurement Frequency	Sample Type
Flow	-	-	-	-	1/month*	instantaneous
TSS	-	-	Report	-	1/month*	grab
Settleable Solids	-	-	Report	-	1/month*	grab
Oil and Grease	-	-	30	-	1/month*	grab
Visible Oil**	-	-	-	-	2/week	**
pH	within range 6.0-9.0				1/month*	grab
96 Hr. LC50	survival in 100% effluent				***	***
NOEL	survival, reproduction, and growth in 100% effluent				***	***

Flow shall be reported in million gallons per day.

* Measurement frequency shall be once per month and must be at least 48 hours later than a 0.1 inch rainfall for the purposes of defining dry weather sampling.

** The permittee shall report whether or not a sheen is present on the water at the outfall structure. Report number of times present and number of times not present in the comment section of the Discharge Monitoring Report Form.

*** Report only during the Schedule of Compliance.

*** See Part III for methodology and Part I.E. for frequency.

INTERNAL MONITORING POINT 01A

Effluent Characteristics	Effluent Limitations				Monitoring Requirements	
	Monthly Avg. Conc. mg/l	Monthly Avg. Amount lb/day	Daily Max. Conc. mg/l	Daily Max. Amount lb/day	Measurement Frequency	Sample Type
Flow	-	-	-	-	1/month*	instantaneous
TSS	-	-	40	-	1/month*	grab
Settleable Solids	-	-	0.5 ml/l	-	1/month*	grab
Oil and Grease	-	-	30	-	1/month*	grab
pH	within range 6.0-9.0				1/month*	grab

Flow shall be reported in million gallons per day.

* Measurement frequency shall be once per month and must be at least 48 hours later than a 0.1 inch rainfall for the purposes of defining dry weather sampling. The storm water discharge sample type (wet weather) shall be taken over the first three (3) hours of the discharge, or over the entire discharge if the discharge lasts less than three (3) hours. Storm events sampled for storm water characteristics shall be greater than 0.1 inches in total rainfall and must be at least 72 hours after a 0.1 inch rainfall. This is to better characterize the dry and wet impacts of CSXT Radnor Yard's contaminated storm water and groundwater discharges.

VIII. Other Requirements

Placement of signs

According to the policy of the Division, the permittee will be required to post a sign at Outfall 001 that notifies the public of the nature of the discharge and that the discharge is regulated by the Division of Water Pollution Control. The location of the sign(s) should be at or near the Outfall points or located where the samples are collected. The permittee may consult the Nashville Basin Office in finding the proper locations for the sign(s).

Inspection of Oil/water separator

The permittee will be required to inspect the oil/water separator twice per week and to maintain a record of the inspection and of occasions when oil is pumped out of the oil storage tank.

Operation of Oil/Water Separator

Water contaminated with substances other than petroleum products or settleable solids amenable to gravity separation shall not be discharged through an oil/water separator until such discharge receives treatment approved by the Division of Water Pollution Control.

Discharge Monitoring Reports (DMR)

DMR's shall be recorded monthly and submitted monthly. Submittals shall be postmarked no later than 15 days after the completion of the reporting period.

Storm Water Discharges

The permittee will be required to develop and maintain a storm water pollution control plan as called for in the Permit, Part IV for the areas defined and covered by this permit.

Ground Water Monitoring Plan

The State feels very strongly that ground water concerns need to be addressed. However, the State of Tennessee does not have resources to closely track and pursue such concerns at this time. Ground water concerns must be addressed by facility operators who bear the responsibility to operate a facility without hazard to the environment. Part of that responsibility is protection of ground water from contamination and fulfilling monitoring needs at the site.

Permit language allows a facility to assess its site and indicate whether there is a possibility for ground water contamination, and thus, a need for ground water monitoring. Contamination of soils or ground water at sites which store diesel fuel and oil indicate a need for ground water monitoring at these facilities.

If ground water monitoring is needed, the facility will institute such monitoring according to a ground water monitoring plan that will be developed by the facility operators. The Division of Water Pollution Control will not require that data and reports generated under the Plan be submitted to the State on a regular basis, but data and reports relevant to the ground water monitoring must be maintained at the facility and provided by the facility to the State upon request.

If ground water contamination is suspected, the facility operators should notify the Division of Water Pollution Control. Also, facility operators should notify neighboring property owners, utilities and those users of ground water who may be affected by such contamination. The Division of Water Pollution Control will require a remediation plan to be submitted within 30 days of the discovery of contamination of the soil or ground water.

The plan will be developed and implemented within 18 months of the effective date of the permit.

The remediation plan is not intended to be a detailed document consisting of plans and specifications for appropriate remediation of the site. Rather, it should be a description of the initial assessment of site contamination. The plan which should be submitted is a proposal for assessing the degree and extent of contamination as well as a schedule for defining and addressing the contamination.

Thirty days is a relatively short turn-around time. However, much of this plan can be prepared in advance by the permittee. The information collected during development of site monitoring will be available and the parameters which are being monitored are known in advance. This gives the permittee a head start on its remediation planning. The site description, maps and consideration of the characteristics of stored materials should be prepared when the monitoring system is set up. If remediation is called for, the permittee will only need to prepare a description of the data that indicate contamination and a schedule of proposed activity. The data and schedule can be combined with previously prepared materials and submitted to the Division to meet initial remediation plan requirements. This allows a quickly prepared and accurate framework for site remediation. More detailed information (such as plans and specifications) will be required as remediation measures are decided upon and implemented.

Contamination of ground water for diesel fuel, gasoline, and petroleum products will be contamination of water or soils at the same level that require cleanups at Underground Storage Tank sites in Tennessee for drinking water uses. All shallow ground water must meet drinking water uses unless a particular aquifer is designated as not classified for such use.

These levels are as follows.

For water:

Benzene	0.005 parts per million
Total petroleum hydrocarbon	0.100 parts per million

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Soils contamination will be related to soil permeability. These values are as follows:

soil permeability:	<u>$\geq 10^{-4}$ cm/sec</u>	<u>10^{-4} to 10^{-6} cm/sec</u>	<u>$< 10^{-6}$ cm/sec</u>
B.T.X.	10 ppm	50 ppm	100 ppm
Total Petroleum			
Hydrocarbon	100 ppm	250 ppm	500 ppm

Contamination of ground water for pollutants other than petroleum hydrocarbons or gasoline will be considered to be any level of a pollutant which impairs a designated use of the water. This definition of what is "contamination" will need to be tailored to the specific materials stored at a site. It is appropriate for a facility to ask for guidance from the Division on what will be considered contamination for materials other than petroleum products.

IX. Permit Duration

The permit shall expire five years from the effective date on the title page.

X. Permit Writer: Abbas Yavari

REQUIREMENTS FOR MAKING A PERMIT APPEAL

Permit Appeal (Tennessee Department of Conservation, Chapter 1200-4-1.05(6), and T.C.A. Section 69-3-110)

1. Petitions must be made within 30 days of the receipt of the final permit.
2. Petitions shall contain the following:
 - (a) The name, mailing address, and telephone number of the person mailing the request and the names and addresses of all persons he or she represents;
 - (b) A clear and concise statement of each legal or factual matter alleged to be at issue; and
 - (c) Specific reference to each permit condition which the petitioner contests. The petitioner may suggest alternate permit terms which would meet the requirements of the Water Quality Control Act; if the petitioner challenges permit conditions which are justified in the fact sheet (or Rationale), the petitioner should indicate how the basis for the permit condition is in error or indicate why an alternate condition is necessary.
3. Petitions should be addressed to the Water Quality Control Board and filed in duplicate at the following address: Paul E. Davis, Director; Division of Water Pollution Control; T.E.R.R.A. Building - 4th Floor; 150 Ninth Avenue, North; Department of Conservation; Nashville, Tennessee 37247-3001.
4. The appeal of a permit or a permit condition has the effect of staying the contested provisions. Therefore, if a permit is being reissued, the permittee will be considered to be authorized under the terms of the old permit and/or any unappealed terms of the reissued permit. If it is a new permit, the applicant will be considered to be without a permit for the activity until final agency action.

E8060092-D4WPC1

Revised Rationale Sheet

NPDES Permit TN0064955
January 28, 1993

EXHIBIT

553

I. Facility Identification

17 7 0355

CSX Transportation - Radnor Yard
Nashville, Davidson County, Tennessee

Facility Contact:

Mr. William M. Cummings, P.E. Phone Number: (904) 359-1986
Dir. Environmental Engineering
CSX Transportation
500 Water Street, 9th Floor
Speed Code J275
Jacksonville, Florida 32202

Greer Tidwell, Jr. Phone Number: (615) 726-5600
Baker, Worthington, Crossley, Stansberry & Woolf
1700 Nashville City Center
511 Union Street
Nashville, Tenn 37219

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Discharge 1EA

Source:

Storm water runoff; groundwater. Runoff comes primarily from the locomotive service area and enters East Fork Browns Creek from the east at the junction manhole. The Division believes this discharge contains more pollutants than discharges from Discharges 1SW and 1SO.

Flow: Variable; see note above.

Treatment: Oil/water separator

Discharge 1SO

Source:

Storm water runoff; groundwater. This discharge enters East Fork Browns Creek at the junction manhole, entering from the classification yard area; i.e., from the south.

Flow: Variable; see note above.

Treatment: No treatment

Discharge 1SW

Source:

Storm water runoff; groundwater. This discharge enters East Fork Browns Creek at the junction manhole, entering from the Trailer On Flat Car (TOFC) yard area; i.e., from the southwest.

Flow: Variable; see note above.

Treatment: No treatment

Outfall 001

Source: Combination of above Discharges 1EA, 1SO, and 1SW

Flow: Variable; see note above.

Treatment: No treatment at this outfall point

Designation of Outfall 001: This permit is drafted to authorize the discharge of storm water and groundwater through point sources 1EA, 1SO, and 1SW to EFBC. Outfall is located behind 4071 Powell Ave. (Heafner Tire) at East Fork Browns Creek mile 2.1.

IV. Receiving Waters

NOTE: The receiving water (East Fork Browns Creek) is at mile 2.3 at the junction manhole, and at mile 2.1 behind Heafner Tire for the purpose of receiving water description in this permit.

Outfall 001

Receiving Water:

East Fork Browns Creek at mile 2.1 (behind Heafner Tire) which enters Browns Creek at mile 3.7 which enters the Cumberland River at mile 192.7

Estimated low flow (3Q20): 0.0 CFS or 0.0 MGD (estimated from U.S.G.S., Ref. No. - 135, Station No. - 03431100),
U.S.G.S., Ref. No. - 136, Station No. - 03431120),
U.S.G.S., Ref. No. - 137, Station No. - 03431200),
U.S.G.S., Ref. No. - 138, Station No. - 03431350)

3Q20 is the critical background flow of the receiving stream, which will be used in this Rationale for East Fork Browns Creek (Rule 1200-4-3-.05 (4)).

STREAM USE CLASSIFICATION: Fish and Aquatic Life, Recreation, Livestock Watering and Wildlife, and Irrigation (Rule 1200-4-4 (12))

V. Applicable Effluent Limitations Guidelines

There are no EPA promulgated effluent limitations guidelines that apply to the discharge of runoff from a railroad terminal or to this discharge of groundwater.

Department of Environment and Conservation regulations Chapter 1200-4-5-.03 set forth Effluent Limitations for Effluent Limited Segments. In the absence of EPA promulgated limitations, the Division employs these limits as maximum effluent limits.

The facility is one which may have "storm water associated with industrial activity" under the storm water regulations in 40 CFR Part 122.26(b)(14).

CSXT has filed for group coverage of their storm water runoff from other areas of their facility not covered by this permit.

VI. New Permit Limits

Outfall 001

Water Quality Considerations-

The Division of Water Pollution Control conducted an intensive stream survey in May, 1989. The Division concluded that East Fork Browns Creek has experienced degradation because of regular discharges of oil, petroleum and other products from Radnor Yard.

East Fork Browns Creek receives runoff from parking lots of 100 Oaks, from I-65 and other nearby roadways.

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 NASHVILLE, DAVIDSON COUNTY

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On June 12, 1990 the Division personnel collected about two gallons of the floating oil and grease material trapped behind the retaining boom maintained by CSX on the East Fork of Browns Creek (a strong petroleum odor surrounded the boom area). The collected samples were taken to the State Laboratory for toxicity testing and oil and grease analyses. The resulting LC50 concentration were 50% at 24 hours and 1% at 48 hours. The oil and grease concentration for the 1% was 5.1 mg/l, and 61.5 mg/l for the 100%.

Application Form 2C Data:

The applicant reported the following concentrations present in its discharges.

<u>Parameter</u>	<u>Concentration (mg/l)</u>	<u>No. of Samples</u>
BOD	12	4
Ammonia	0.37	4
Oil and Grease	254	3
Surfactants	0.2	1

Other pollutants are reported at less than significant amounts.

Since CSXT has constant flow through Outfall 001 either from groundwater or storm water runoff, TDWPC proposes to monitor their discharges behind 4071 Powell Ave. (Heafner Tire) at East Fork Browns Creek mile 2.1; and internal monitoring at the present oil and water separator. After construction of the new oil and water separator is completed, sampling and internal monitoring must be conducted at the new API oil-water separator. TDWPC proposes dry weather monitoring and sampling of the receiving stream and both dry weather and wet weather monitoring and sampling at the oil and water separator.

The Division proposes the following limitations on the CSX discharges from Outfall 001 behind 4071 Powell Ave. (Heafner Tire) at East Fork Browns Creek mile 2.1.

OUTFALL 001 (dry weather monitoring and sampling)

Flow

The permittee will be required to monitor flow and report as million gallons per day. Monitoring of flow quantifies the load of pollutants to the stream.

Oil and Grease

The Division has determined that an oil and grease limitation is needed for this facility because of the potential of contamination from spills, leaks, and because of CSX's impact on the receiving stream because of their contaminated storm water runoff and groundwater discharge. This parameter will be limited to 30 mg/l daily maximum concentration. This level is one which can be accomplished where oil/water separators are maintained, kept clean and are not overloaded. There should be less reliance upon the oil/water separator as a solution and a greater reliance upon good management, operation and housekeeping practices to restrict pollution.

The State maximum effluent limitation "no visible or floating oil and grease," referring to the discharge from the treatment unit, will also be applied. A visual inspection of the discharge will be required twice per week to determine and record whether or not there is a visible sheen on the discharge immediately below the outfall structure.

Total Suspended Solids: Monitor and report only

Settleable Solids: Monitor and report only

pH

The pH of the discharge will be monitored. Limits for pH will be set at the State Standard Guidance (Rule 1200-4-5-.03), i.e. within the range 6.0 to 9.0.

Biomonitoring

Toxicity Testing: June 12, 1990 State Laboratory toxicity testing on ceriodaphnia dubia showed, LC50 concentration were 50% at 24 hours and 1% at 48 hours.

Tennessee Water Quality Criteria include the condition that all waters of the State be free from substances in concentrations or combinations which are harmful to humans, animals, or aquatic life (T.C.A. 69-3-102 and T.C.A. 69-3-103(21) (D)).

This discharge of storm water runoff and groundwater from a railroad yard contains several different pollutants, the combined effect of which has been detrimental to fish and aquatic life. The Division proposes that CSXT conduct a study of toxicity by testing the discharge during dry and wet weather flows. No numerical limits will be set on the toxicity of Discharge 001 during this study period. A two years schedule of compliance will be included in the Permit Part 1.E. At the end of this study period, CSXT will be required to provide the Division with a complete report, and recommendation on ways to eliminate the toxicity problems at Outfall 001. TDWPC, may then require CSXT to conduct more tests and/or implement toxicity reduction of the discharge. Permit limits on the toxicity of the discharge may also be added to the permit.

Present, standard chronic biomonitoring language will be used for guideline purposes in this study. Both dry weather flow (groundwater discharge) and wet weather flow (runoff and groundwater discharge) must be included in the toxicity tests.

The permittee shall conduct 7-Day Ceriodaphnia Survival and Reproduction Test and 7-Day Fathead Minnow (Pimephales promelas) Larval Survival and Growth Test on samples of final effluent from Outfall 001 during this study period.

The discharge enters a stream with a low flow at or near zero; in order to protect the receiving stream at low flow, the permit will require that 100% effluent to be used in the toxicity tests. Toxicity will be demonstrated if more than 50% lethality of test organisms occurs in 96 hours in 100% effluent or the no observable effect level (NOEL) is less than 100%.

INTERNAL MONITORING POINT 01A (wet and dry weather)

TDWPC proposes the following limitations and monitoring requirements at the oil and water separator (01A):

Methylene Blue Active Substances (MBAS)

Surfactants in the oil/water separator would inhibit separation of oil from water. The Division proposes for CSXT Radnor to use Best Management Practices (BMP) in the use of soaps and detergents that may enter the oil/water separator as part of their storm water pollution prevention plan. No numerical limit will be included in the permit.

Settleable Solids

The Division believes a limit on settleable solids is needed also to indicate adequate operation of the treatment unit, and to protect the receiving stream from sludge deposits that would interfere with propagation of aquatic life. The State maximum effluent limit of 0.5 ml/l (Rule 1200-4-5-.03) will be established as the permit limit.

Total Suspended Solids (TSS)

Water Quality Criteria: No floating solids or sludge banks.

Selected Permit Limits: Since the storm water discharge can be expected to pick up suspended solids, State effluent limitation of 40 mg/l daily maximum concentration (State Rule 1200-4-5.03(2)) will be used as permit limit to prevent violation of the water quality criteria and protect the classified uses of the receiving stream. This TSS limitation will be established.

Oil and Grease

This parameter will be limited to 30 mg/l daily maximum concentration.

pH

The pH of the discharges through the oil and water separator will be monitored. Limits for pH will be set at the State Standard Guidance (Rule 1200-4-5-.03), i.e. within the range 6.0 to 9.0.

VII. Monitoring Frequencies and Sample Type

OUTFALL 001

Effluent Characteristics	Effluent Limitations				Monitoring Requirements	
	Monthly Avg. Conc. mg/l	Monthly Avg. Amount lb/day	Daily Max. Conc. mg/l	Daily Max. Amount lb/day	Measurement Frequency	Sample Type
Flow	-	-	-	-	1/month*	instantaneous
TSS	-	-	Report	-	1/month*	grab
Settleable Solids	-	-	Report	-	1/month*	grab
Oil and Grease	-	-	30	-	1/month*	grab
Visible Oil**	-	-	-	-	2/week	**
pH	within range 6.0-9.0				1/month*	grab
96 Hr. LC50	survival in 100% effluent				***	***
NOEL	survival, reproduction, and growth in 100% effluent				***	***

Flow shall be reported in million gallons per day.

** Measurement frequency shall be once per month and must be at least 48 hours later than a 0.1 inch rainfall for the purposes of defining dry weather sampling.

** The permittee shall report whether or not a sheen is present on the water at the outfall structure. Report number of times present and number of times not present in the comment section of the Discharge Monitoring Report Form.

*** Report only during the Schedule of Compliance.

*** See Part III for methodology and Part I.E. for frequency.

INTERNAL MONITORING POINT 01A

Effluent Characteristics	Effluent Limitations				Monitoring Requirements	
	Monthly Avg. Conc. mg/l	Monthly Avg. Amount lb/day	Daily Max. Conc. mg/l	Daily Max. Amount lb/day	Measurement Frequency	Sample Type
Flow	-	-	-	-	1/month*	instantaneous
TSS	-	-	40	-	1/month*	grab
Settleable Solids	-	-	0.5 ml/l	-	1/month*	grab
Oil and Grease	-	-	30	-	1/month*	grab
pH	within range 6.0-9.0				1/month*	grab

Flow shall be reported in million gallons per day.

* Measurement frequency shall be once per month and must be at least 48 hours later than a 0.1 inch rainfall for the purposes of defining dry weather sampling. The storm water discharge sample type (wet weather) shall be taken over the first three (3) hours of the discharge, or over the entire discharge if the discharge lasts less than three (3) hours. Storm events sampled for storm water characteristics shall be greater than 0.1 inches in total rainfall and must be at least 72 hours after a 0.1 inch rainfall. This is to better characterize the dry and wet impacts of CSXT Radnor Yard's contaminated storm water and groundwater discharges.

VIII. Other Requirements

Placement of signs

According to the policy of the Division, the permittee will be required to post a sign at Outfall 001 that notifies the public of the nature of the discharge and that the discharge is regulated by the Division of Water Pollution Control. The location of the sign(s) should be at or near the Outfall points or located where the samples are collected. The permittee may consult the Nashville Basin Office in finding the proper locations for the sign(s).

Inspection of Oil/water separator

The permittee will be required to inspect the oil/water separator twice per week and to maintain a record of the inspection and of occasions when oil is pumped out of the oil storage tank.

Operation of Oil/Water Separator

Water contaminated with substances other than petroleum products or settleable solids amenable to gravity separation shall not be discharged through an oil/water separator until such discharge receives treatment approved by the Division of Water Pollution Control.

Discharge Monitoring Reports (DMR)

DMR's shall be recorded monthly and submitted monthly. Submittals shall be postmarked no later than 15 days after the completion of the reporting period.

Storm Water Discharges

The permittee will be required to develop and maintain a storm water pollution control plan as called for in the Permit, Part IV for the areas defined and covered by this permit.

Ground Water Monitoring Plan

The State feels very strongly that ground water concerns need to be addressed. However, the State of Tennessee does not have resources to closely track and pursue such concerns at this time. Ground water concerns must be addressed by facility operators who bear the responsibility to operate a facility without hazard to the environment. Part of that responsibility is protection of ground water from contamination and fulfilling monitoring needs at the site.

Permit language allows a facility to assess its site and indicate whether there is a possibility for ground water contamination, and thus, a need for ground water monitoring. Contamination of soils or ground water at sites which store diesel fuel and oil indicate a need for ground water monitoring at these facilities.

If ground water monitoring is needed, the facility will institute such monitoring according to a ground water monitoring plan that will be developed by the facility operators. The Division of Water Pollution Control will not require that data and reports generated under the Plan be submitted to the State on a regular basis, but data and reports relevant to the ground water monitoring must be maintained at the facility and provided by the facility to the State upon request.

If ground water contamination is suspected, the facility operators should notify the Division of Water Pollution Control. Also, facility operators should notify neighboring property owners, utilities and those users of ground water who may be affected by such contamination. The Division of Water Pollution Control will require a remediation plan to be submitted within 30 days of the discovery of contamination of the soil or ground water.

The plan will be developed and implemented within 18 months of the effective date of the permit.

The remediation plan is not intended to be a detailed document consisting of plans and specifications for appropriate remediation of the site. Rather, it should be a description of the initial assessment of site contamination. The plan which should be submitted is a proposal for assessing the degree and extent of contamination as well as a schedule for defining and addressing the contamination.

Thirty days is a relatively short turn-around time. However, much of this plan can be prepared in advance by the permittee. The information collected during development of site monitoring will be available and the parameters which are being monitored are known in advance. This gives the permittee a head start on its remediation planning. The site description, maps and consideration of the characteristics of stored materials should be prepared when the monitoring system is set up. If remediation is called for, the permittee will only need to prepare a description of the data that indicate contamination and a schedule of proposed activity. The data and schedule can be combined with previously prepared materials and submitted to the Division to meet initial remediation plan requirements. This allows a quickly prepared and accurate framework for site remediation. More detailed information (such as plans and specifications) will be required as remediation measures are decided upon and implemented.

Contamination of ground water for diesel fuel, gasoline, and petroleum products will be contamination of water or soils at the same level that require cleanups at Underground Storage Tank sites in Tennessee for drinking water uses. All shallow ground water must meet drinking water uses unless a particular aquifer is designated as not classified for such use.

These levels are as follows.

For water:

Benzene 0.005 parts per million

Total petroleum hydrocarbon 0.100 parts per million

RATIONALE, TN0064955
CSX TRANSPORTATION - RADNOR YARD
Nashville, Davidson County

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Soils contamination will be related to soil permeability. These values are as follows:

soil permeability:	<u>$\geq 10^{-4}$ cm/sec</u>	<u>10^{-4} to 10^{-6} cm/sec</u>	<u>$< 10^{-6}$ cm/sec</u>
B.T.X	10 ppm	50 ppm	100 ppm
Total Petroleum Hydrocarbon	100 ppm	250 ppm	500 ppm

Contamination of ground water for pollutants other than petroleum hydrocarbons or gasoline will be considered to be any level of a pollutant which impairs a designated use of the water. This definition of what is "contamination" will need to be tailored to the specific materials stored at a site. It is appropriate for a facility to ask for guidance from the Division on what will be considered contamination for materials other than petroleum products.

IX. Permit Duration

The permit shall expire five years from the effective date on the title page.

X. Permit Writer: Abbas Yavari



Safety, Quality & Environment

W. M. Cummings, P.E.
Director Environmental
904-359-1986

Sing - before - into
w/ sell on these progress
reports. Thanks - P.J.

17 7 - 0365

March 6, 1992

PJE
LBSC 3/31
JKG
CNM
MJS
500 Water Street
Jacksonville, FL 32202



Mr. Paul E. Davis, Director
Division of Water Pollution Control
T.E.R.R.A. Building
Nashville, TN 37219-5404

Re: CSX Quarterly Progress Report - Corrective Action at Radnor Yard

Dear Mr. Davis:

This letter is to advise you of the progress made during the past quarter on the assessment and corrective action aimed at eliminating oil contamination in the storm drainage from CSX Transportation's Radnor Yard in Nashville.

1. Storm water flow monitoring has been completed. Design flow criteria for the proposed free-oil removal facility has been selected. A report concerning storm water flow monitoring is being finalized.
2. The design work on the oil remedial mitigation measures at Radnor Yard is being completed. Detailed engineering design is now underway for the new storm water free-oil removal facility at the oil recovery manhole and a concrete apron for the track area between turntable pit and the inner wall of the roundhouse. This should be completed and reviewed with Division of Water Pollution Control during March, 1992.
3. A contractor has been selected for constructing the proposed facilities and will be reviewing and pricing the improvements based on the final design documents. Pricing has been received for long lead items (enclosed screw pumps) and contracts are being awarded to those suppliers. Construction is expected to begin in April.
4. CSXT representatives met with the State of Tennessee's representatives in October, 1991, and discussed the proposed NPDES permit. No response has yet been received by CSXT regarding the revised draft document.
5. RCI has completed a plan of water lines on the site and has field checked pipeline locations and has completed leak detection survey. Those major leaks that were detected (3) have been repaired by CSXT. The map is being finalized.

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Mr. Paul E. Davis

- 2 -

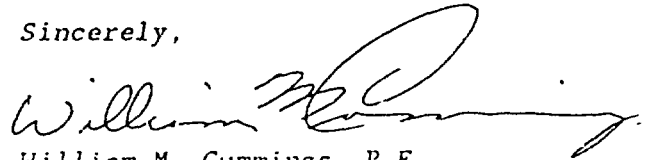
March 6, 1992

6. A new manhole has been installed at the junction point of the 36" roundhouse stormwater sewer and the 2' x 2' box culvert (in the vicinity of locomotive servicing tracks). This manhole (which is over 30 feet deep) will allow access for further investigation of possible sources of contamination.

A copy of our preliminary implementation schedule for the oil contamination mitigation projects tasks is enclosed for your information.

If additional information is needed, or you have any questions, please do not hesitate to contact either me at CSXT, Jacksonville, or Ed Hockensmith at Resource Consultants.

Sincerely,


William M. Cummings, P.E.

cc: Resource Consultants, Inc.

REVISED
IMPLEMENTATION SCHEDULE
OIL CONTAMINATION MITIGATION
CSXT RADNOR YARD
NASHVILLE, TENNESSEE

17 7 0367

Task No.	Project Description	Anticipated Beginning Date	Anticipated Completion Date
06	Design & Construction of Gravity Oil-Water Separator(s) at Oil Recovery Manhole		
	Design & Planning	August 1, 1991	March 15, 1992
	Construction	April 1, 1992	November 18, 1992
07	Negotiate NPDES Permit Conditions	August 1, 1991	July 31, 1992
08	Biotoxicity Study of Brown's Creek and CSXT Storm Sewers	August 1, 1991	August 31, 1992
09	Design & Construction of Concrete Aprons in Turntable & Roundhouse Areas		
	Design & Planning	September 15, 1991	March 15, 1992
	Construction	April 1, 1992	November 18, 1992
10	Storm Flow Monitoring Study	September 15, 1991	March 15, 1992
11	Design & Construction of Diesel Fuel Storage Tanks		
	Design & Planning	February 1, 1992	April 15, 1992
	Construction	May 1, 1992	November 18, 1992

3/4/92



REVISED
IMPLEMENTATION SCHEDULE
OIL CONTAMINATION MITIGATION
CSXT RADNOR YARD
NASHVILLE, TENNESSEE

17 7 0368

Task No.	Project Description	Anticipated Beginning Date	Anticipated Completion Date
12	Upgrade Existing Free-Oil Treatment Facilities		
	Engineering Report	December 1, 1991	March 30, 1992
	Prepare Plans & Specifications	March 30, 1992	May 1, 1992
	Construction	June 1, 1992	November 18, 1992
13	Design & Construction of Clean Storm Sewer for Roof Drainage		
	Design & Planning	September 15, 1991	April 1, 1992
	Construction	April 15, 1992	November 18, 1992
14	Tracing & Mapping Sewer and Water Lines	November 1, 1991	July 15, 1992
15	Prepare Report Concerning Disposal or Remediation of Petroleum Contaminated Soil	October 15, 1991	April 1, 1992
16	Prepare Report for Handling, Treating and Disposing Waste Oily Sludges	April 1, 1992	August 28, 1992

3/4/92

